

### **REMARKS**

Claims 1-30, 32-34, 36-44, 49-51 and 53-58 are pending.

Applicant notes the rescindment of the Notice of Abandonment which was erroneously issued for the present application and mailed on August 15, 2007.

### **CLAIM OBJECTIONS**

#### ***Objection of claims under 35 U.S.C. § 132(a)***

The Examiner has maintained the objection of the claim amendments filed November 9, 2006 under 35 U.S.C. § 132(a) as the Examiner contends that the amendments "introduces new matter into the disclosure." See Office Action at p. 2. Claims 1, 27, 42, 53 and 54 are independent claims.

Claims 1, 27, 42, 53 and 54 were previously amended to recite the phrase "the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater." These amendments are supported by Figures 1 and 6 of the specification. For example, Figure 6 of the specification illustrates that "the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater." The distance between adjacent slots prior to expansion is 1/8<sup>th</sup> of an inch whereas the width of the formed sheet prior to expansion is an inch. See Figure 6 of the specification. Therefore, no new matter has been added by the amendments to the claims.

Applicant respectfully requests the withdrawal of this objection.

### **CLAIM REJECTIONS**

#### ***Rejection of claims under 35 U.S.C. § 112, first paragraph***

The Examiner has maintained the rejection of claims 1, 3-15, 27-30, 32-34, 36-44, 49-51 and 53-58 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. See Office Action at p. 2. Claims 1, 27, 42, 53 and 54 are independent claims. Applicant respectfully traverses this rejection.

As explained previously, the phrase "the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater" is

supported by Figures 1 and 6 of the specification. For example, Figure 6 of the specification illustrates that "the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater." The distance between adjacent slots prior to expansion is  $1/8^{\text{th}}$  of an inch whereas the width of the formed sheet prior to expansion is an inch. See Figure 6 of the specification. Accordingly, the specification sufficiently describes the claimed invention in full, clear, concise and exact terms. Applicant respectfully requests reconsideration and withdrawal of this rejection.

***Rejection of claims under 35 U.S.C. §103***

The Examiner has maintained the rejection of claims 1, 3-15, 17-30, 32-51 and 53-59 under 35 U.S.C. §103(a) as being unpatentable over German Patent No. 3,336,378 to Knauf ("Knauf") in view of U.S. Patent No. 5,605,024 to Sucato et al. ("Sucato"), U.S. Patent No. 5,913,788 to Herren ("Herren"), and U.S. Patent No. 5,527,625 to Bodnar ("Bodnar"). See Office Action at pages 3-7. Claims 1, 27, 42, 53 and 54 are independent.

**Claims 1, 27 and 42**

Applicant has discovered a metal framing including a web region including a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids, each expanded web slot has a length to width ratio of about 2:1 or greater, and the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater. See claims 1, 27, and 42.

The Examiner refers to Knauf and Sucato and contends that "it is within the scope of both references to expand the web of the stud to the required dimensions for any particular constructions project for which the stud is incorporated." See Office Action at p. 7. Knauf shows a framing member having a much smaller ratio of web element width to **unexpanded** framing member width. See Fig. 1 of Knauf. Knauf does not teach or suggest a framing member in which the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater. This defect is not remedied in Sucato. Sucato discloses "a pair of U-shaped members 62 and 63 which may be formed of a

metallic material that are interconnected by bight 64 comprising an expandable mesh 65" (col. 4, lines 22-25 of Sucato), and shows a framing member having a much smaller ratio of web element width to unexpanded framing member width than recited in claims 1, 27, and 42. See Figs. 20-21 of Sucato.

These defects are not remedied in Herren and Bodnar either. Each of these references fails to teach or suggest a framing member in which the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater.

There is no motivation or suggestion within the references to combine Knauf with Sucato, Herren, or Bodnar. The references, alone and in combination, fail to teach the claimed ratio of web element width to unexpanded framing member width.

Accordingly, claims 1, 27, and 42, and claims that depend therefrom are patentable over the combination of Sucato, Bodnar and Herren for at least the reasons discussed above.

Applicant requests that this rejection be reconsidered and withdrawn.

### **Claim 53**

As previously explained, none of the references teaches or suggests that the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater.

The Examiner contends that "[i]n view of the teaching of the primary reference however it is clear that the heat treatment would have to take place after expanding the slot of Knauf or Sucato in order to avoid destroying the teaching of either reference." See Office Action at p. 8.

MPEP 2145, paragraph X(A), states that "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in that art at the time the claimed invention was made and **does not include knowledge gleaned only from applicant's disclosure**, such a reconstruction is proper" (emphasis added by Applicants) (citing *In re McLaughlin* 443 F.2d 1392, 1395 (CCPA 1971)). The Examiner's obviousness rejection of the claims violates the basic considerations of obviousness as set forth in MPEP 2141 ("[t]he

references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.”).

None of Knauf, Sucato, or Herren, alone or in combination, teach or suggest heat treating expanded web slots in a formed metal sheet. The Examiner incorrectly asserts that Bodnar teaches this element, referring to column 7, line 50 - column 8, line 65. Bodnar actually discloses that the described member **can be formed from cold rolled or hot rolled steel**. See column 2, lines 41-42 of Bodnar. Bodnar does not teach or suggest expanding the slots of the web region to form expanded slots having a web element and a web void, and heat treating the member after expanding the slots. Bodnar merely describes piercing cold rolled or hot rolled steel.

Additionally, as previously explained, there is no motivation or suggestion to combine the teachings of Knauf, Sucato, Herren, and Bodnar. For at least these reasons, claim 53 should be allowed. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

#### **Claim 54**

Claim 54, which recites a metal framing member having expanded web slots that are heat treated, also stands rejected as being obvious over Knauf in view of Sucato, Herren, and Bodnar. As previously explained, Knauf, Sucato, Herren, and Bodnar do not disclose expanded web slots that have been heat treated. Further as previously discussed, these references also fail to teach or suggest that the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater, or that the framing member includes a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids.

Additionally, as noted, there is no motivation or suggestion to combine the teachings of Knauf, Sucato, Herren, and Bodnar. For at least these reasons, claim 54 should be allowed. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

**Evidence of Non-Obviousness**

MPEP 2141 states that the "Office policy is to follow *Graham v. John Deere Co.* in the consideration and determination of obviousness under 35 U.S.C. 103." MPEP 2141 further states that "[a]s quoted above, the four factual inquiries enunciated therein as a background for determining obviousness are as follows: (A) Determining the scope and contents of the prior art; (B) Ascertaining the differences between the prior art and the claims in issue; (C) Resolving the level of ordinary skill in the pertinent art; and (D) Evaluating evidence of secondary considerations."

Applicant submits two Declarations under 37 C.F.R. § 1.132 from Roger A. LaBoube ("LaBoube declaration," attached at Appendix A) and Francis J. Roost ("Roost declaration," attached at Appendix B) as evidence of secondary consideration in the determination of obviousness under 35 U.S.C. § 103.

Professor LaBoube is a Professor in the Department of Civil Engineering at the University of Missouri-Rolla. Professor LaBoube has reviewed the metal framing member concept and has concluded the following:

This concept is innovative in that it incorporates the structural features required of a wall stud application. Importantly the metal framing member design concept incorporates a highly efficient use of materials, thus the high strength to weight ratio should be realized.

In addition to providing an efficient load bearing wall stud, the web profile should realize significant energy efficiency. Further, the use of galvanized sheet steel is an appropriate material selection. The sheet steel provides excellent strength and the galvanized coating will ensure long term durability.

See the LaBoube declaration.

Mr. Roost is a retired (unlicensed) Certified Public Accountant (CPA) who was asked to comment on the potential commercial value of the design as presented in U.S. Application Serial No. 10/633,694. Mr. Roost has concluded the following:

First, based on a 2002 study (best available) for non residential construction, interior walls, published by the Steel Framing Alliance, there are 2.8 billion lineal feet of product made annually, that could be affected. A copy of the study is attached as Exhibit A. See page 13. The Reported Tonnage of product ha[s] been converted to lineal feet in exhibit B.

Second, the design concept described in the above-mentioned provisional and utility applications reduces usage of material by 37% as compared to the existing commercial product. Current interior wall technology uses 0.331 lb/ft versus 0.209 lb/ft with this new concept. The savings which result is 0.122 lb/ft. A copy of the calculations is Exhibit C.

Third, according to the 9/6/2007 edition of the American Metal Market, pricing on Galvanized Steel used to make this product is currently is \$39.00 per hundredweight or \$0.39/lb., A copy of the pricing is attached as Exhibit D.

If this design was incorporated into 100% of the available market, the annual market value through material savings alone would be \$133,000,000.00. Calculations are Exhibit E. These calculations do not include Exterior walls, Floors and Roofs, which per the inventor, are also potential uses of this patent [application].

See the Roost declaration.

As such, substantial evidence of non-obviousness exists relating to commercial success and unexpected advantages of Applicant's invention. Applicant respectfully requests reconsideration and withdrawal of this rejection.

### CONCLUSION

For the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the pending rejections.

Applicant believes that the claims now pending are in condition for allowance. Should any further fees be required by the present Reply, the Commissioner is hereby authorized to charge Deposit Account 19-4293.

Respectfully submitted,

Date:

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